



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Amarasekera, et al.	Group Art Unit:	1713
Application No.:	09/000,824	Examiner:	C. Caixa Lu
Filed:	December 30, 1997	Att'y Dkt. No.:	41980.002004
Title:	SILICONE COMPOSITIONS FOR HIGH VOLTAGE INSULATOR APPLICATIONS		

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re

REQUEST FOR AN INTERFERENCE  
PURSUANT TO 37 C.F.R. § 1.607

Assistant Commissioner for Patents  
Washington, D.C. 20231

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Sir:

Applicants request an Interference Pursuant to 37 C.F.R. § 1.607 between the above-identified application and U.S. Patent No. 5,824,729, issued October 20, 1998, and U.S. Patent No. 6,090,879, issued July 18, 2000. The information required by 37 C.F.R. § 1.607(a) is set forth below under headings which correspond to the subsections of § 1.607 to facilitate consideration by the Examiner.

(1) IDENTIFICATION OF THE PATENTS WHICH INCLUDE SUBJECT  
MATTER WHICH INTERFERES WITH THE APPLICATION

The patents which include subject matter which interferes with subject matter claimed in the above-identified application ("the Amarasekera Application") are (1) U.S. Patent No. 5,824,729 ("the '729 Patent"), issued on October 20, 1998, to Takao Matsushita and Osamu Takuman for a "Silicone Rubber Composition" and (2) U.S. Patent No. 6,090,879 ("the '879 Patent"), issued July 18, 2000, to Osamu Takuman and Takao Matsushita for a "Silicone Rubber Composition for Application as Electrical Insulation." The '729 Patent issued from U.S. Patent Application Serial No. 790,782, filed January 30, 1997, and purports to be entitled to the benefit of Japanese Application

No. 8-037457, filed January 30, 1996. The '879 Patent issued from U.S. Patent Application Serial No. 08/862,045, filed May 22, 1997, and purports to be entitled to the benefit of Japanese Application No. 8-152978, filed May 24, 1996. Dow Corning Toray Silicone Co., Ltd. is the assignee named on the face of both the '729 Patent and the '879 Patent.

(2) PRESENTATION OF PROPOSED COUNTS

Applicants respectfully submit proposed Counts 1 and 2 which are attached hereto in Appendix A. Proposed Count 1 is identical to Claim 1 of the '729 Patent. Proposed Count 2 is identical to Claim 1 of the '879 Patent, except that element (B) of Claim 1 of the '879 Patent recites "1 to 300 *with* parts surface-treated aluminum hydroxide powder" rather than "1 to 300 *weight* parts surface-treated aluminum hydroxide powder" as recited in proposed Count 2.

(3) IDENTIFICATION OF THE CLAIMS IN THE '729 PATENT AND THE '879 PATENT WHICH CORRESPOND TO THE PROPOSED COUNTS

Claim 1 of the '729 Patent, which is the first of two independent claims in the '729 Patent, is identical to proposed Count 1 and therefore corresponds exactly to proposed Count 1. Claim 2 of the '729 Patent, which is the second of two independent claims in the '729 Patent, corresponds substantially to proposed Count 1. A side-by-side comparison is set forth as follows:

<u>Claim 2 of the '729 Patent</u>	<u>Count 1</u>
A silicone rubber composition comprising:	A silicone rubber composition comprising:
(A) 100 weight parts organopolysiloxane gum having at least 2 silicon-bonded	(A) 100 weight parts organopolysiloxane gum having at least 2 silicon-bonded

<p>alkenyl groups in each molecule and the average compositional formula:</p> $R_aSiO_{(4-a)/2}$ <p>in which R is selected from substituted and unsubstituted monovalent hydrocarbon groups and <math>a</math> has a value from 1.95 to 2.05,</p>	<p>alkenyl groups in each molecule and the average compositional formula</p> $R_aSiO_{(4-a)/2}$ <p>in which R is selected from substituted and unsubstituted monovalent hydrocarbon groups and <math>a</math> has a value from 1.95 to 2.05,</p>
<p>(E) 10 to 300 weight parts aluminum hydroxide powder whose surface has been treated with a treating agent selected from the group consisting of silanes and siloxane oligomers having alkenyl and alkoxy or hydroxy substitution, and</p>	<p>(B) 10 to 300 weight parts aluminum hydroxide powder,</p> <p>(C) 0.1 to 30 weight parts of a treating agent selected from the group consisting of silanes and siloxane oligomers having alkenyl and alkoxy or hydroxy substitution, and</p>
<p>(D) 0.1 to 10 weight parts organoperoxide.</p>	<p>(D) 0.1 to 10 weight parts organoperoxide.</p>

Element (A) of Claim 2 and Count 1 correspond exactly.

Element (E) of Claim 2 and elements (B) and (C) of Count 1 differ only in that element (E) of Claim 2 recites the aluminum hydroxide powder and the treating agent as a combined element whereas elements (B) and (C) of Count 1 separately recite aluminum hydroxide powder and treating agent, respectively. It will be appreciated, however, that element (E) of Claim 2 and element (B) of Count 1 both recite "10 to 300 weight parts aluminum hydroxide powder. And that element (E) of Claim 2 and element (C) of Count 1 both recite "a treating agent selected from the group consisting of silanes and siloxane oligomers having alkenyl and alkoxy or hydroxy substitution."

As such, it is believed that element (E) of Claim 2 and elements (B) and (C) of Count 1 correspond to one another.

Element (D) of Claim 2 and Count 1 correspond exactly.

The remaining claims of the '729 Patent— Claims 3-18— are all dependent claims which depend from independent Claims 1 and 2, either directly or indirectly. Claims 3-18 are believed to correspond substantially to proposed Count 1 as they do not define separate patentable inventions in view of Claims 1 and 2 and in view of Count 1.

Likewise, Claim 1 of the '879 Patent, which is the only independent claim in the '879 Patent, is identical to proposed Count 2 and therefore corresponds exactly to proposed Count 2. The remaining claims in the '879 Patent— Claims 2-15— are all dependent claims which depend from Claim 1, either directly or indirectly. Claims 2-15 are believed to substantially correspond to proposed Count 2 as they do not define separate patentable inventions in view of Claim 1 and in view of Count 2.

**(4) CLAIMS OF THE AMARASEKERA APPLICATION WHICH  
CORRESPOND TO THE PROPOSED COUNTS**

Claim 17 of the Amarasekera Application corresponds substantially to the proposed count. A side-by-side comparison is set forth as follows:

<u>Claim 17 of Amarasekera Application</u>	<u>Count 1</u>
A silicone rubber composition comprising:	A silicone rubber composition comprising:
(A) 100 weight parts organopolysiloxane gum having at least 2 silicon-bonded alkenyl groups in each molecule and the average compositional formula:	(A) 100 weight parts organopolysiloxane gum having at least 2 silicon-bonded alkenyl groups in each molecule and the average compositional formula
$R_aSiO_{(4-a)/2}$	$R_aSiO_{(4-a)/2}$

in which R is selected from substituted and unsubstituted monovalent hydrocarbon groups and $\alpha$ has a value from 1.95 to 2.05,	in which R is selected from substituted and unsubstituted monovalent hydrocarbon groups and $\alpha$ has a value from 1.95 to 2.05,
(B) 15 to 300 weight parts aluminum hydroxide powder, <i>flame retardant supported, p. 6</i>	(B) 10 to 300 weight parts aluminum hydroxide powder,
(C) 0.1 to 1 weight part of a silane treating agent, and	(C) 0.1 to 30 weight parts of a treating agent selected from the group consisting of silanes and siloxane oligomers having alkenyl and alkoxy or hydroxy substitution, and
(D) 0.1 to 5 weight parts of a peroxide based curing agent, wherein said silane treating agent (C) is present in an amount effective to act as a surface modifier for the aluminum hydroxide powder.	(D) 0.1 to 10 weight parts organoperoxide.

It will be appreciated that Claim 17 of the Amarasekera Application does not correspond exactly to proposed Count 1. Pursuant to 37 C.F.R. § 1.607(a)(4), Applicants will therefore provide the required explanation why Claim 17 corresponds to Proposed Count 1, looking at each of the elements (A)-(D).

Element (A) of Claim 17 and Count 1 correspond exactly.

Element (B) differs only in that Claim 17 recites "15 to 300 weight parts aluminum hydroxide powder" whereas Count 1 recites "10 to 300 weight parts aluminum hydroxide powder." As the ranges are largely overlapping, including the

common range of “15-300 weight parts,” it is believed that they legally correspond to one another.

Element (C) of Claim 17 and element (C) of proposed Count 1 are not literally identical. However, it will be appreciated that element (C) of Claim 17 recites one species of treating agent (silane) whereas proposed Count 1 includes a silane treating agent as one species. Furthermore, although the ranges recited are not identical, they do overlap.

Element (D) differs only in that Claim 17 recites “0.1 to 5 weight parts of a peroxide” whereas Count 1 recites “0.1 to 10 weight parts organoperoxide.” As the ranges are largely overlapping, including the common range of “0.1 to 5 weight parts,” it is believed that they legally correspond to one another.

Claim 18 of the Amarasekera Application corresponds substantially to proposed Count 2. A side-by-side comparison is set forth as follows:

<u>Claim 18 of Amarasekera Application</u>	<u>Count 2</u>
A silicone rubber composition comprising	A silicone rubber composition comprising
(A) 100 weight parts organopolysiloxane gum having at least 2 silicon-bonded alkenyl groups in each molecule,	(A) 100 weight parts organopolysiloxane gum having at least 2 silicon-bonded alkenyl groups in each molecule and the average compositional formula $R_aSiO_{(4-a)/2}$ in which R is selected from substituted and unsubstituted monovalent hydrocarbon groups and a has a value from 1.95 to 2.05
(E) 15 to 300 weight parts aluminum	(E) 10 to 300 weight parts aluminum

hydroxide powder whose surface has been treated with a silane treating agent	hydroxide powder whose surface has been treated with a treating agent selected from the group consisting of silanes and siloxane oligomers having alkenyl and alkoxy or hydroxy substitution
(D) 0.1 to 5 weight parts organoperoxide	(D) 0.1 to 10 weight parts organoperoxide.

Once again, although not corresponding exactly, it is believed that Claim 18 of the application substantially corresponds to proposed Count 2. In each instance, both in terms of the ranges and the compositions, the elements are either identical or are related as a species/genus.

Element (A) of Claim 18 and Count 2 both recite "100 weight parts organopolysiloxane gum having at least 2 silicon-bonded alkenyl groups in each molecule.

Element (E) of Claim 18 and Count 2 are not literally identical. However, it will be appreciated that element (E) of Claim 18 recites one species of treating agent (silane) whereas proposed Count 2 includes a silane treating agent as one species. Furthermore, although the ranges recited are not identical, they do overlap.

Element (D) differs only in that Claim 18 recites "0.1 to 5 weight parts organoperoxide" whereas Count 2 recites "0.1 to 10 weight parts organoperoxide." As the ranges are largely overlapping, including the common range of "0.1 to 5 weight parts," it is believed that they legally correspond to one another.

(5) APPLYING THE TERMS OF ANY APPLICATION CLAIM TO THE  
DISCLOSURE OF THE APPLICATION

Under 37 C.F.R. § 1.607(a)(5), Applicants are required to apply the terms of any application claim (i) identified as corresponding to the count; and (ii) not previously in the application to the disclosure of the application. In the present case, none of the claims designated as corresponding to a count was “not previously in the application.” Accordingly, Applicants are not required to provide this showing.

(6) EXPLANATION OF HOW THE REQUIREMENTS OF 35 U.S.C.  
§ 135(B) ARE MET

All of the claims now pending were present in the application within one year of the issuance of both the '729 and '879 patents. Accordingly, no explanation is required. However, Applicants note that Claim 17 has been amended since it was added to the application to recite “wherein said silane treating agent (C) is present in an amount effective to act as a surface modifier for the aluminum hydroxide powder.” It will be appreciated that this further description of the silane treating agent is an inherent characteristic of Claim 17, as originally added to the application, and to Count 1. As such, this later addition of this claim language did not narrow or expand the scope of Claim 17, as originally added to the application.

**PRIMA FACIE SHOWING BY AMARASEKERA, ET AL.,  
PURSUANT TO 37 C.F.R. § 1.608**

As the December 30, 1997, the filing date of the Amarasekera Application is more than three months after the effective filing date of both the '729 Patent and the '879 Patent. Applicants file herewith a Declaration pursuant to 37 C.F.R. § 1.608 demonstrating that Applicants are *prima facie* entitled to a judgment relative to the patentee.



### CONCLUSION

Applicants respectfully request that an interference be declared employing the proposed Counts 1 and 2 set forth in attached Appendix A with Claims 1-18 of the '729 Patent; Claims 1-15 of the '879 Patent; and the claims of the Amarasekera Application designated *supra* as corresponding to the proposed counts. Such action is respectfully requested.

In the event that the Examiner has any questions concerning this Request By Applicant For Interference Pursuant to 37 C.F.R. § 1.607, or the above-identified application in general, the Examiner is invited to contact the undersigned attorneys concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,

Dated: July 25, 2002

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APPENDIX A

1. A silicone rubber composition comprising:

(A) 100 weight parts organopolysiloxane gum having at least 2 silicon-bonded alkenyl groups in each molecule and the average compositional formula



in which R is selected from substituted and unsubstituted monovalent hydrocarbon groups and  $a$  has a value from 1.95 to 2.05,

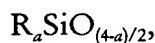
(B) 10 to 300 weight parts aluminum hydroxide powder,

(C) 0.1 to 30 weight parts of a treating agent selected from the group consisting of silanes and siloxane oligomers having alkenyl and alkoxy or hydroxy substitution, and

(D) 0.1 to 10 weight parts organoperoxide.

2. An electrical insulating silicone rubber composition comprising

(A) 100 weight parts polyorganosiloxane comprising at least 2 silicon bonded alkenyl groups in each molecule and having average compositional formula



where R is selected from the group consisting of substituted monovalent hydrocarbon groups and unsubstituted monovalent hydrocarbon groups and  $a$  has a value of from 1.95 to 2.05,

(B) 1 to 300 weight parts surface-treated aluminum hydroxide powder surface treated with a treating agent selected from the group consisting of organomethoxysilanes, organoethoxysilanes, and organosilazanes, and

(C) an organoperoxide curing agent in a quantity sufficient to cure the

composition.